

Mazda J48 (Familia)
Toolgate-0 Agenda

August/10/2001

- 1, Purpose of Receiving an Order for Mazda J48 Program
- 2, Customer Market and Volume
- 3, Development Schedule
- 4, Customer Requirement
- 5, Project Resource Requirement Proposal
- 6, PACT(COST SUMMARY)
- 7, Mazda J48 Team List
- 8, Environmental Aspects
- 9, Open Issues

Confidential - Produced Pursuant to Protective Order/Andrews v. Mazda

AUTOLIV01089

PLAINTIFF'S
EXHIBIT
PX 52

exhibitsticker.com

Purpose of Receiving an Order for Occupant Restraint

System in Mazda J48 Program

Background :

- Ford/Mazda made a decision to develop the J48 program using C car platform. Autoliv was awarded a full system supplier(FSS) for occupant restraint equipment(TRW was also awarded some programs in C car platform).



Mazda J48 program is developed at Mazda Japan and we are to participate in Mazda's development as the FSS in Japan. Taking this opportunity, we are targeting to obtain a business of the J48 occupant restraint system.

Target :

- To raise the management efficiency of a company by receiving an order of the large-sized business over 200,000 vehicle unites yearly output, which is yearly turnover of about 1,600 million yen.
- ANG is a Front Seat Belt supplier for current Mazda J39 program. Maintaining the current Front Seat Belt business as well as extending the business, we will improve our customer support by production and development locally.



As a reborn AJS, we will resume dealing with Mazda and become the core that promotes Occupant Restraints system in Autoliv K.K. for Mazda. It is indispensable that we should receive an award of the occupant restraints system as the FSS in Japan..

This page translated in the original by the previous page, AUTOLIV1090

マツダファミリア（Ｊ４８）受注の狙い

経緯：

- ・フォードＣカープラットフォームにマツダＪ４８も組込まれ、Ｃカーの一部として車両開発が決定された。
- ・乗員保護装置のサプライヤーにＦＳＳとして欧州オートリブが選定された（一部車両ＴＲＷ）。



マツダＪ４８は日本開発となり、日本オートリブがＦＳＳとして参画。
このチャンスにＯＲシステム受注確定を目指す。

狙い：

- ・年商約１６億円、年産２０万台超の大型ビジネスを受注し、会社の運営効率を高める。
- ・現行ファミリア（Ｊ３９）で前席ベルトをＡＮＧから供給しており、その継続拡大に加え、日本開発・生産によるカスタマーサポートを向上させる。



新生ＡＪＳとして、マツダへの復帰を果たし、日本オートリブのＯＲシステムをマツダへ拡販する中核となる。ＯＲシステムをＦＳＳとして受注するためには、シートベルト受注は不可欠。

Customer Market & Volume

Vehicle Type	Seat	Destination								Tota	
		JPN		USA		EC		OTH			
		Current J39A	J48E	Curre J39A	J48E	Curre J39A	J48E	Curre J39A	J48E	Curre J39A	J48E
Seda	Front	ANG	AJS 900Car/M	ANG	AJS 6,300Car/M	ANG	AJS 1,470Car/M	ANG	AJS 4,700Car/M	ANG	AJS 14,000Car/M 13,370Car/M
	Rear	TK	AJS 900Car/M	TK	AJS 6,300Car/M	TK	AJS 1,470Car/M	TK	AJS 4,700Car/M	TK	AJS 13,370Car/M
Wa	Front	ANG	AJS 1,670Car/M	ANG	AJS 1,140Car/M	ANG	ANG 4,430Car/M	ANG	AJS 1,190Car/M	ANG	AJS 10,000Car/M 4,000Car/M
	Rear	TK	AJS 1,670Car/M	TK	AJS 1,140Car/M	TK	ANG 4,430Car/M	TK	AJS 1,190Car/M	TK	AJS 4000Car/M

↑
ANG: J48G

[illegible]

Customer requirement

Current Drawing (Estimate)

[FR-Inn]

PBP Gen. 2.1 + Hall Effect SW

[FR-Out]

DR : R27LLD

PA : R27LLD + ALR

[HA]

Nissan Tsumami Type + Deformable Rail (For FMVSS 201)

[RS-Inn]

K12-Buckle (Webb)

[RS-Out]

R27 + ALR (Parcel Shelf Mount)

[RC-Inn]

K12-Buckle (Webb)

[RC-Out]

R27 + ALR (SED : Parcel Shelf Mount, 5HB : D-Pillar Mount)

Lap Outer : Separation Buckle (#13Z-27)

Customer Specification No.

MES PA 57060C : Seat Belts

MES PW PT001D : Interior / Exterior Plastics Parts

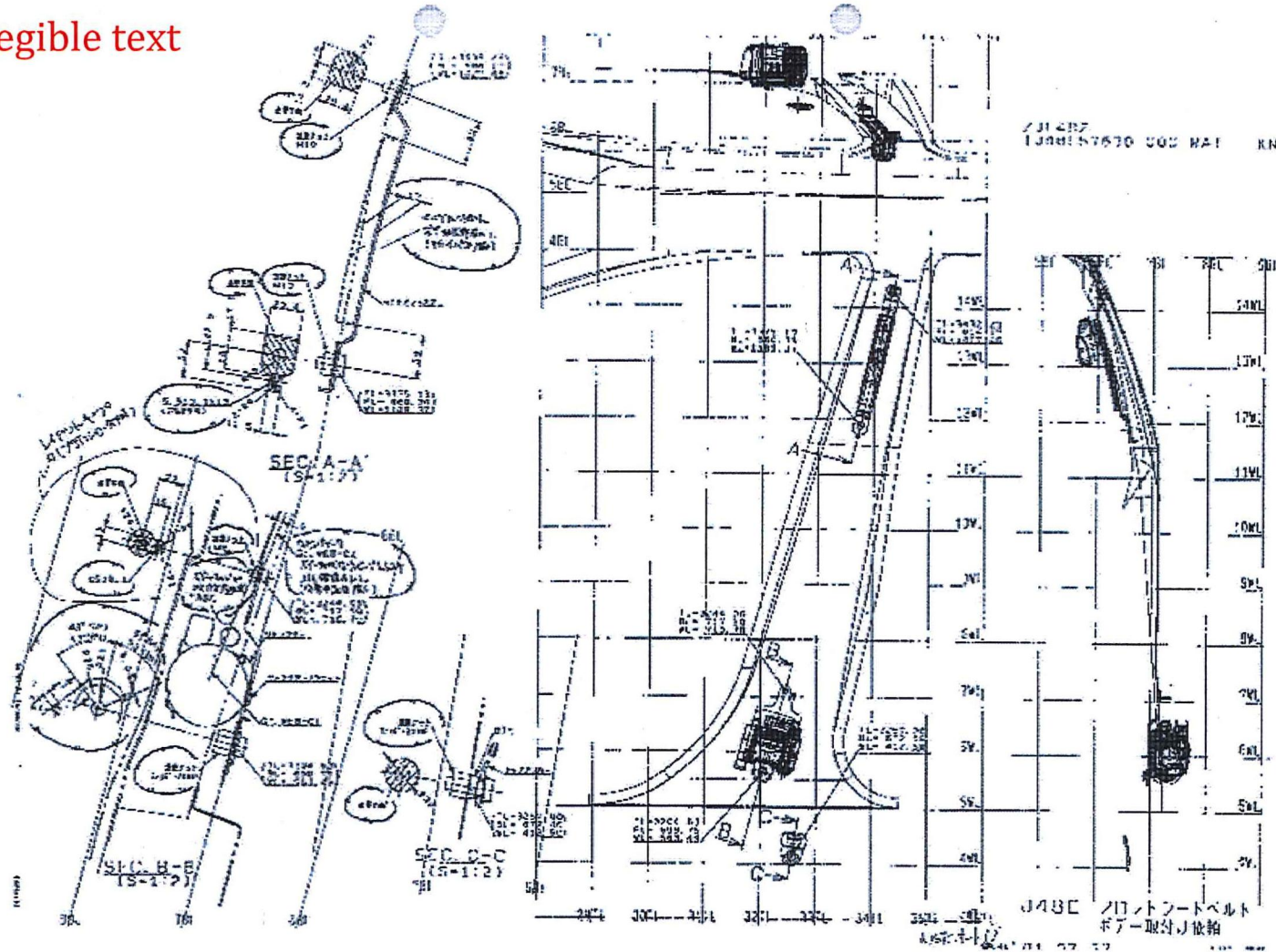
MES CF 050C : Flammability of Interior Parts

MES CF 250C : Material Marking on Plastic and Rubber Parts

MES CG 310B : Plating

ESG-J48E57060 : Engineering Specification for Seat Belt

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Detailed Statement of the Development Costs for the Mazda J48 Proposal (the breakdown for entering PACT data)				
			7/25/2001	Kamei
		Breakdown	Total	
Manpower	Development personnel expenses	System design supervision (Kamei): 0.9 persons * 24 months (2 persons * 4 months + 1 person * 8 months + 0.5 persons * 12 months)	¥16,200,000	
		Drawings group personnel: 0.05 * 2 years	¥900,000	
		CAD operators: 1 persons * 12 months (¥4500/hr * 19h + ¥6000/hr * 200h)	¥9,840,000	
		Subtotal	¥26,940,000	
Sled Testing	Sled test expenses (No. 2)	Pre-shipping check: ¥30,000/shot * 2 shots * 4 times * 6 part numbers	¥1,440,000	
		Part check test: ¥30,000/shot * 2 shots * 2 times * 6 part numbers	¥1,080,000	
	Sled test expenses (No. 3)	New waveform	¥120,000	
		White body reinforcement, jig creation expense	¥500,000	
		Performance check: ¥40,000/shot * 2 shots * 6 part numbers	¥4,800,000	
		Subtotal	¥7,940,000	
Barrie Te	Barrier test expenses	Not scheduled	¥0	
		Subtotal	¥0	
Lab Testing	Experiment expenses	Regulations test: 0.3 persons * 1.5 years		
			¥4,050,000	
		Customer spec test: 0.3 persons * 1.5 years	¥4,050,000	
		HA stage evaluation: 3 persons * 3 months	¥405,000	
		PBP assessment test: 3 persons * 3 months	¥405,000	
		Subtotal	¥8,910,000	
Quantitative Analysis	Materials analysis expenses	Not scheduled	¥0	
		Subtotal	¥0	

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E

Prototype Tooling	Trial manufacturing tooling expenses	HA rail: ¥2,000,000 * 1 part number		F
		Garnish: ¥1,000,000 * 1 part number		
		Cover: ¥1,000,000 * 1 part number	¥4,000,000	
		Anchor plate: ¥300,000 * 3 part numbers (RS outer & RC 2 sheets overlapped)	¥900,000	
		Bracket: ¥800,000 * 5 part numbers (RR tray placement)		
		¥800,000 * 1 part numbers (RC pillar placement)	¥4,800,000	G
		Subtotal	¥9,700,000	
Sample/Test pieces	Sample expenses, test parts expenses	Samples for investigation: ¥15,000 * 2 part numbers * 3 sets		
		¥10,000 * 4 part numbers * 3 sets	¥210,000	
		Regulations test: ¥15,000 * 2 part numbers * 5 sets		
		¥10,000 * 4 part numbers * 5 sets	¥350,000	
		Customer spec test: ¥15,000 * 2 part numbers * 5 sets		
		¥10,000 * 4 part numbers * 5 sets	¥350,000	
		HA stage evaluation	¥300,000	H
		PBP assessment	¥200,000	
		Subtotal	¥1,410,000	
Other Co	Other	Sample/CAD data delivery expenses:		
		¥2000 * 12 times	¥24,000	
		New GNC terminal expenses: 1 unit * 12 months		
		(EWS: ¥105,000/month * 12 months)	¥1,260,000	
		Mazda business trip expenses: ¥40,000 * 80 times (commuting expenses)		
		¥9000 * 150 nights (lodging expenses)		
		¥2400 * 200 days (per diem)	¥5,030,000	I
		Communication expenses (mobile telephone): ¥5000/month * 12 months	¥60,000	
		Subtotal	¥6,374,000	
Income (negative)	Income (minus the appropriated amount)	Samples for evaluating the passenger restraint performance		
			-¥2,510,000	
		Subtotal	¥-2,510,000	
		Total (A~I)	¥58,764,000	

Note: (1) Personnel expenses are calculated on a base of ¥5000/h * persons * 1800h/year = ¥9,000,000/year * persons.
(2) Mass production preparation operations for production/quality assurance separately requires 0.3 persons * 2 years = ¥5,400,000 approximate.
(3) 6 part numbers for belts are shown as Dr/Pa/RS/RC * 3 types.
(4) No. 3 sled expenses are ¥200,000~500,000/shot, but this changed by execution details so ¥500,000 for midterm + alpha.
(5) This estimate is a trial calculation only for belts of Japan design/Japan delivery, and so the specification to be delivered from Europe AUTOLIV...

R5.1 COST SUMMARY

Estimate No.-01-034 Jul-23-2001 TGO

#1	Project Name: 0 Project #: 0 Project Manager: 0 Part #: J48 4DR Description: SOP: Apr 2003	#2	Product Life Cycle (Yrs) Project Start Date Project Duration to SOP (Yrs) 0.0 Start of Production	Cost Item	Unit	Contribution (%)
					Green	<15% 15 - 25% >25%
	DEVELOPMENT COSTS	Jul.02	Target			
#3	Manufact	20,040,000	20,040,000	0	0	
	Sled Testing	7,500,000	7,500,000	0	0	
	Barrier Testing	0	0	0	0	
	Laboratory Testing	8,100,000	8,100,000	0	0	
	Metrology Testing	0	0	0	0	
	Prototype Tooling	9,700,000	9,700,000	0	0	
	Samples/Test pieces	110,000	1,410,000	0	0	
	Other (exp. travel) %	13,464,000	6,374,000	0	0	
	Income (neg.)	-2,010,000	-2,510,000	0	0	
	Subtotal-Development Costs	61,984,000	58,764,000	0	0	
	CAPITAL EXPENDITURE					
#5	Production Line	33,450,000	105,250,000	0	0	
	Production Tooling	23,160,768	24,760,460	0	0	
	Test Equipment	0	0	0	0	
	Gauges & Fixtures	0	0	0	0	
	Other	0	0	0	0	
	Income (neg.)	0	0	0	0	
	Subtotal-Capital Expenditures	56,610,768	131,010,460	0	0	
#7	Total Costs	118,594,768	188,802,490	0	0	
#8	Production Line	X = high; S = medium; C = low				
	Feasibility - Product					
	Feasibility - Quantity					
#9	ASSUMPTIONS	Jul.02	Target			
	Direct Labor per Hour	THB 50.00	THB 50.00	THB 50.00	THB 50.00	
	Scrap,Pig Freight,Duty	5.4%	5.4%	5.4%	5.4%	
	Overhead/SG&A (on SP)	13.7%	13.7%	13.7%	13.7%	
	Tax rate					
	Capital Expenditure Allocation					
	Allocated Costs					
	KEY RATIOS					
	Contribution Margin %	10.4%	21.1%	#DIV/0!	#DIV/0!	
	Material %	57.4%	51.9%	#DIV/0!	#DIV/0!	
	Direct Labor %	2.3%	7.0%	#DIV/0!	#DIV/0!	
	Overhead & SG&A %	9.2%	11.4%	#DIV/0!	#DIV/0!	
	Development costs (Yr) %	1.8%	1.5%	#DIV/0!	#DIV/0!	
	P.L.	0.9%	1.4%	#DIV/0!	#DIV/0!	
	Depr production line (3yr) %	0.8%	2.5%	#DIV/0!	#DIV/0!	
	Depr tooling (1yr) %	0.2%	0.6%	#DIV/0!	#DIV/0!	
	Total Capital Expend (incl alloc)	56,610,768	131,038,460	0	0	
	Return on Sales (before tax) %	-1.5%	4.7%	#DIV/0!	#DIV/0!	
	Return on Capital Employed %	-10.6%	73.7%	100.0%	100.0%	
#10	Comments:	(blue requires input)				
	Estimate No.-01-034 Jul-23-2001 TGO					
	This is the 4DR SED's PACT. (SOP is Excluded)					
	THB=2.25yen, EUR=105yen					
	Assembly plant	Jul.02	Target			
	4DR					
	PRA : PBP.Goa.2.1+hall xw	ASG	AJS(NA)			
	PR-B-Q: R27LLD	ATH(NSTT)	ATH(NSTT)			
	PR-B-P: R27LLD + A/E	ATH(NSTT)	ATH(NSTT)			
	H.A.C : AJS NISSAN burners type	AJS(NA)	AJS(NA)			
	RC-B : R27Paxel + A/E	ATH(NSTT)	ATH(NSTT)			
	RC-B : R27Paxel + A/E (Separation)	ATH(NSTT)	ATH(NSTT)			
	RC+RS: K12-BKL + K12-BKL	ATH(NSTT)	ATH(NSTT)			
	RC+RS: AJS-Separation BKL + K12-BKL	ATH(NSTT)	ATH(NSTT)			
	PRODUCT COSTS	Jul.02	Target			
	Sales Price (Avg)	3200.00	3025.00	0.00	0.00	
	Direct Material per BOM (Avg)	6029.31	5554.00	0.00	0.00	
	Labor minutes per car-set (Avg)	42.59	59.35	0.00	0.00	
	Direct Labor (Avg)	184.91	258.95	0.00	0.00	
	Scrap, Freight, Duty on DM	336.96	219.98	#DIV/0!	#DIV/0!	
	Subtotal Direct Costs	7351.18	6324.93	#DIV/0!	#DIV/0!	
	Contribution Margin	448.82	1690.07	#DIV/0!	#DIV/0!	
	Overhead/SG&A	757.46	617.04	0.00	0.00	
	Development Cost (yrs)	3	122.43	122.43	ACRV/0!	0.00
	Capital Amortization (yrs)	3	118.61	273.00	ACRV/0!	0.00
	Profit per Car-set	(156.36)	379.75	#DIV/0!	#DIV/0!	0.00
	Throughput per car-set	1,093.73	2,252.02	#DIV/0!	#DIV/0!	0.00
	Volume (car-sets per yr)	160,000	160,000	0	160,000	
	Selling Positions (per yr)	1	160,000	160,000	0	160,000
	Annual Sales	1,312,000,000	1,264,000,000	0	0	
	Annual EBIT	-5,843,200	104,432,960	#DIV/0!	#DIV/0!	
	Calculated payback in years	n/a	2	#DIV/0!	ACRV/0!	
	Net Profit in 3yrs	-18,128,000	313,296,000	#DIV/0!	#DIV/0!	
	Comments:	(blue requires input)				
	Estimate No.-01-034 Jul-23-2001 TGO					
	This is the 4DR SED's PACT. (SOP is Excluded)					
	THB=2.25yen, EUR=105yen					
	Assembly plant	Jul.02	Target			
	4DR					
	PRA : PBP.Goa.2.1+hall xw	ASG	AJS(NA)			
	PR-B-Q: R27LLD	ATH(NSTT)	ATH(NSTT)			
	PR-B-P: R27LLD + A/E	ATH(NSTT)	ATH(NSTT)			
	H.A.C : AJS NISSAN burners type	AJS(NA)	AJS(NA)			
	RC-B : R27Paxel + A/E	ATH(NSTT)	ATH(NSTT)			
	RC-B : R27Paxel + A/E (Separation)	ATH(NSTT)	ATH(NSTT)			
	RC+RS: K12-BKL + K12-BKL	ATH(NSTT)	ATH(NSTT)			
	RC+RS: AJS-Separation BKL + K12-BKL	ATH(NSTT)	ATH(NSTT)			
	Jul.02	Target: SOP				
	PRODUCT COSTS	Jul.02	Target			
	Sales Price (Avg)	3200.00	3025.00	0.00	0.00	
	Direct Material per BOM (Avg)	6029.31	5554.00	0.00	0.00	
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	Assembly plant	Jul.02	Target			
	4DR					
	PRA : PBP.Goa.2.1+hall xw	ASG	AJS(NA)			
	PR-B-Q: R27LLD	ATH(NSTT)	ATH(NSTT)			
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	RC-B : R27Paxel + A/E	ATH(NSTT)	ATH(NSTT)			
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	PRODUCT COSTS	Jul.02	Target			
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	4DR					
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	PR-B-Q: R27LLD	ATH(NSTT)	ATH(NSTT)			
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	RC+RS: K12-BKL + K12-BKL	ATH(NSTT)	ATH(NSTT)			</

Autoliv		Team List	
Confidential		Version 2.0	
From: Yuji Kamei	To: Project team		
	Keishi Yamada	Account Management	ALJ
	Hiroshi Kimura	Account Management	ALJ
	Susumu Baba	Corporate Planning & Administrative	AJS
	Syuuji Tomizawa	Global Purchasing	AJS
	Masaru Kobayashi	Seat Belt Plant	AJS
	Takashi Abe	Seat Belt Plant	AJS
	Timo Rau	Ford New Market Sales Management	ASG
	Frank Bartel	Seat Belt Application	ASG
	Wolfgang Richter		ASG
	Detlef Hein		ASG
	cc: Project Executive		
	Workers council (AJS)		
	Masayuki Kano	Seat Belt Technology	AJS
	Colin Naughton	Group Integration	AJS
	Osamu Kawai	Quality Assurance	AJS
Project Name: Mazda J48 (2003 Apr. ~)			
Team members + Managers signatures		Signatures	Date
Seat Belt Technology	(PM) Yuji Kamei	AJS	
Account Management	Keishi Yamada	ALJ	
Account Management	Hiroshi Kimura	ALJ	
Corporate Planning & Administrative	Susumu Baba	AJS	
Global Purchasing	Syuuji Tomizawa	AJS	
Seat Belt Plant	Masaru Kobayashi	AJS	
Seat Belt Plant	Takashi Abe	AJS	
Account Management	Takayoshi Matsunaga	AKK	
Corporate Planning & Administrative	Takeshi Matsuoka	AJS	
Global Purchasing	Daizaburo Hashimoto	AJS	
Seat Belt Technology	Masayuki Kano	AJS	
Seat Belt Plant	Shingo Iwasa	AJS	
Filepath/name/date			



Choose de right option

TG0	
TG1	
TG2	
TG3	

Environmental Aspects

TG0 Environmental Standards to fulfil: Customer: 2000/53/EC (EU ELV Directive) Autoliv: AS-5 Local: KBD 4190 																										
TG1 <i>Engineering</i> <i>Purchase</i>	<table border="1"> <thead> <tr> <th>OK</th> <th>REMARKS</th> <th>COMMENTS</th> </tr> </thead> <tbody> <tr> <td></td> <td>Acc. to II-07</td> <td></td> </tr> <tr> <td></td> <td>Acc. to attached checklist</td> <td></td> </tr> </tbody> </table>	OK	REMARKS	COMMENTS		Acc. to II-07			Acc. to attached checklist																	
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Open Issues

1. About seat belt specification

- a) The seat belt specification is not yet Fixed. (Depends on passenger restraint performance.)
→ When changed to AGB101, profit went into the negative.
- b) The control model for sales price is SED.
→ Reliably reflect the increase portion, due to 5HB specification difference, in the sales price.

2. About production site/equipment

- a) In order to assure profit, use of Japan manufacturing for PBP Gen 2.1 is essential.
→ Need to introduce PBP production line.
- b) Details are unclear on PBP Gen 2.1, R27LLD production equipment.
→ Need to investigate production line in Germany and Australia,
and discern by expenses, production capability, personnel structure, etc.

3. About part unit cost

- a) Calculate based on purchasing price data (direct level) at ANG.

4. About mass production orders

- a) Mass production orders are not yet settled. (Designated by development supervising supplier.)
- b) Even if development is stopped, we are notified that it will not apply to the entire guarantee request.
- c) Need to cut cost increase amounts for specification changes hereafter.

Mazda J48 - Open Issues List - Open Issues - For NSK - Autofire Internal Use Only										
Category	No.	Date	Action Required	Developer	Responsible	Target Completion	Priority (1-5 High)	Actual Completion	Comments	Status (Y/N)
General	1	22/1/2002	AKS to inform what support they need for drawings. AKS to look at extracting 2D drawings from Hiroshima office, in any of this style is possible as currently. Permission to photocopy. If that was the CAD as mentioned at Mazda in Cologne, Germany. Kamei-san to send 2. Run copies of all J48 part and assembly numbers.	Kamei-san	Kamei-san	Ongoing	2		Mazda have not yet received the J48's vehicle numbers, so no assembly part numbers are available at this time. They will advise once this has taken place.	Y
	2	20/02/2002	Discussion with Mazda to take place to agree the submission and approval procedure. This should be written for both regions. CLJ to advise ANO who is responsible for drawing release.	Kamei-san	Kamei-san / Hiroshimatsu / T. Rao	Ongoing	2		AKS stated that they have been advised that paper copy submission to Mazda is acceptable.	Y
	3	20/02/2002	Kamei-san to ask Mazda how to register and get access to Mazda. Interchange PPT series for supplier information exchange. Kamei-san to test the information to Hiroshima, so that the link can be active.	Hiroshi-san	Kamei-san	Ongoing	3			Y
	4	20/02/2002	AKS to create test specification for Mazda proposal. This should state that it is a variation of both regions projects, i.e. J48 & G. These internally at AKS, then with ANO and ALJ before proposing to Mazda.	Kamei-san	T. Rao / S. S. S. S. S.	Ongoing	1		Copy of document was sent to Mazda. It was received from Mazda and sent to ANO. This is linked to the 22/02/2002 document. (Available in part of document)	Y
	5	20/02/2002	Both are close to the AutoV, as have J48G development to be carried out by Mazda. This includes part numbers used, and the design specifications to be worked to, and which type of submission process and documentation. AKS to request this from Mazda in conjunction with the Test Specification requirements from the General section issues, then advise T. Rao at ANO. AKS to create a proposal in Mazda. Discuss this internally at AKS, then together with ANO and ALJ before proposing to Mazda.	Kamei-san	Kamei-san / Hiroshimatsu	Ongoing	3		Mazda of Ford part numbers are required by ANO in order to be able to start documentation and drawing creation.	Y
	6	20/02/2002	AKS to advise Kamei-san of items to receive the PDP samples. Samples required include: Ball Sensor, and should be completely C214 enclosure installation. ANO to advise Kamei-san of prototype BOMs for the PDP Gen 2.1. ANO to advise Kamei-san of prototype BOMs for the B27 LL and B27 LL2 test samples. Minimize information needed is: Frame-type, Retraction Spring, Strength and LL levels. W. Richter to advise Kamei-san of the Airway bill number for the pending samples when sent.	Kamei-san	T. Rao	Week 32	4		Send sample delivery required at NSK by 02/07/01. - 4 B27 and 2 LL2 medium level B27 LL2 assemblies. - 4 B27 and 2 LL2 high level B27 LL2 assemblies. - 10 B27 and 2 LL2 PDP Gen 2.1 assemblies. - Mazda Torque, 10 placed in B27 LL2 assemblies. - Assembly day (in completion 24/07/01). - Initial test requirements for the B27 LL2 test samples. - This will be a test day 2.1 assemblies. - B27 LL2 assemblies at 2 B27 LL2 level B27 LL2 assemblies. One day at 02/07/01.	Y
	7	20/02/2002	C. Hiler to program just developing the actual information for each ball sensority development status, and then send to W. Richter at ANO.	W. Richter	C. Hiler	Week 32	4			Y
	8	20/02/2002	Kamei-san has obtained a copy of the S-1 build test specifications for the PDP Gen 2.1. Kamei-san to confirm the test requirements for the assemblies. A copy is to be translated and sent to ANO for review, and understanding. After Kamei-san has a copy of the latest Hiroshima version of the Mazda development 2002 PDP 2.1 BOM and send to W. Richter at ANO.	T. Rao	Kamei-san	Week 32	2		This specification must be met. Copy of 2002 PDP 2.1 BOM received from Kamei-san 01/07/01.	Y
	9	20/02/2002	ALJ to update documentation to be updated according to latest known assembly requirements, as and when pricing becomes available. These costs are then to be assessed for change from those previously quoted.	Hiroshi-san	Hiroshi-san	Ongoing	3		Costs of supplier required to track costs, and maintain the system (as an adding-on to the assembly parts). Mazda to be informed when this occurs.	Y
	10	20/02/2002	The next vehicle submission year ANO is to take place on Friday 03/09/01 at 14:00 Japanese time.						For Information Only	Y